

## A new species of *Notaepytus* Skelley, 2009 (Coleoptera: Erotylidae: Tritomini) from Dominican amber

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*Notaepytus quisqueya* sp. nov. (Erotylidae: Erotylinae: Tritomini), is described here from Dominican amber and is the second amber fossil description for the family from the West Indies (Hispaniola). An emended key and a checklist to all known species of *Notaepytus* are presented.

**Key words:** Cucujoidea, Greater Antilles, fossil, checklist, key, Miocene

Aquí se describe *Notaepytus quisqueya* sp. nov. (Erotylidae: Erotylinae: Tritomini), obtenido de ámbar Dominicano. Es la segunda descripción de un fósil en ámbar en esta familia para las Indias Occidentales (Hispaniola). Se presentan una clave modificada y una lista de verificación para todas las especies conocidas de *Notaepytus*.

**Palabras clave:** Cucujoidea, Antillas Mayores, fósiles, lista de verificación, clave, Mioceno

There are about 3500 described species in about 300 genera in the family Erotylidae (Węgrzynowicz 2002; Leschen 2003). Currently, the family is comprised of six subfamilies (Cryptophilinae, Erotylinae, Languriinae, Loberinae, Pharaxonothinae, and Xenoscelinae) (Leschen 2003), but the higher classification is disputed and needs further study (Lyubarsky & Perkovsky 2018). The majority of erotylids are mycophagous, but some are phytophagous, saprophagous, or cycad pollen feeders (Leschen & Buckley 2007).

Until recently, only a few fossil erotylids were known (Poinar 1992; Poinar & Poinar 1999) and even fewer were scientifically described (Green River: Scudder 1878; Florissant: Wickham 1912, 1914, 1916). One fossil was misidentified as an erotylid (Wu 1996) and was subsequently moved to Zopheridae: Colydiinae by Skelley (1997). Skelley (1997) then described a species of *Dacne* Latreille, 1796 from Dominican amber. All described erotylid fossils are listed in Table 1. Kirejtshuk & Azar (2013) reported a fossil from Lower Cretaceous Lebanese amber, but did not formally describe it. This brings the total of described fossil erotylid species to 13 (Xenoscelinae (4), Pharaxonothinae (1), Languriinae (1), and Erotylinae (7)). Loberinae and Cryptophilinae are the only subfamilies without a described fossil species.

Here we present the description a new species of *Notaepytus* Skelley, 2009 from the Dominican Republic, the eighth fossil species described in the subfamily Erotylinae. This is also the fourth genus in the subfamily with a described fossil, and the second fossil erotylid species from the West Indies. The previously published key to the species of *Notaepytus* is emended, and we present a checklist of the 18 species in the genus.

### Material and methods

The specimen studied was from the private collection of Paul E. Skelley (PES) and is now deposited at the Florida State Collection of Arthropods (FSCA; Gainesville, FL, USA). A calibrated Leica MS5 stereomicroscope was used for the description and the measurements. Images were taken with an automontage system (JVC Digital Camera KY-F75U and Leica Z16 APO lens), processed using Syncroscopy Auto-Montage Pro®, and modified in PaintShop Pro 7. The habitus line-drawing was produced in CorelDRAW X5.

**TABLE 1.** List of erotylids described from fossils.

Taxon Name	Subfamily	Type of Fossil	Deposit	Geological Age	Citation
<i>Tritoma binotata</i>	Erotylinae	shale	Green River	Eocene	Scudder 1878
<i>Triplax materna</i>	Erotylinae	shale	Florissant	Miocene	Wickham 1912
<i>Triplax submersa</i>	Erotylinae	shale	Florissant	Miocene	Wickham 1912
<i>Triplax diluviana</i>	Erotylinae	shale	Florissant	Miocene	Wickham 1914
<i>Triplax petrefacta</i>	Erotylinae	shale	Florissant	Miocene	Wickham 1916
<i>Dacne brodzinskyi</i>	Erotylinae	amber	Dominican	Miocene	Skelley 1997
<i>Xenohimatium rovnense</i>	Xenoscelinae	amber	Rovno	Late Eocene	Lyubarsky & Perkovsky 2012
<i>Triplax contienensis</i>	Erotylinae	amber	Bitterfeld	Upper Eocene	Alekseev 2014
<i>Warnis tvanksticus</i>	Xenoscelinae	amber	Baltic	Late Eocene	Lyubarsky <i>et al.</i> 2016
<i>Serramorphus rasnitsyni</i>	Languriinae	amber	Bitterfeld	Late Eocene	Lyubarsky & Perkovsky 2017a
<i>Xenophagus popovi</i>	Xenoscelinae	amber	Baltic	Late Eocene	Lyubarsky & Perkovsky 2017b
<i>Cycadophila mumia</i>	Pharaxonothinae	amber	Baltic	Eocene	Alekseev & Bukejs 2017
<i>Microzavaljus saxonicum</i>	Xenoscelinae	amber	Bitterfeld	Late Eocene	Lyubarsky & Perkovsky 2018

## Results

### *Notaepytyus* Skelley, 2009

Besides being found on Hispaniola, the fossil species possesses the combination of diagnostic characters for the genus *Notaepytyus*: triangular mental plate, femora lacking posterior marginal bead, antennomere IX longer than wide and triangularly narrowed, terminal antennomere distinctly pale, and body brown to black with a color pattern.

### *Notaepytyus quisqueya* Keller and Skelley, new species (Figures 1a–c)

**Diagnosis.** *Notaepytyus quisqueya* is readily distinguished from other species in the genus by the circular, black macula on the disc of the pronotum (Fig. 1a), the distinctly triangular and flattened antennomere VIII (Fig. 1b, arrow), and the distinct elytral marks (Fig. 1c).

**Description.** Length: 7.7 mm; width: 2.6 mm.

Body elongate, somewhat flattened; surface weakly microreticulate, glossy or satiny. Color black except as noted: femora and base of tibiae red-brown; antennomere XI pale; prosternum anteriorly red-brown; pronotum orange except black discal spot; scutellar shield pale orange anteriorly; elytra with three orangish bands, sinuate band at basal third not touching suture, broad anteriorly rounded band at apical quarter that touches suture, and large apical spot; elytral epipleuron reddish beyond basal quarter; abdominal ventrites laterally with large triangular orangish area.

Head interocular width =  $1.5 \times$  ocular width; vertex and epistome puncture size =  $0.5\text{--}1.0 \times$  ocular facet diameter, separated by  $2\text{--}3 \times$  their diameter, epistome anterior margin truncate [half missing]. Eyes coarsely faceted (Fig. 1b). Antennomere III length =  $5 \times$  width, antennomere III length slightly less than length of antennomeres IV+V combined; antennomeres IV–VI equal in length, length =  $2 \times$  width; antennomeres VII–VIII shorter than VI, with VII weakly triangular, VIII distinctly triangular, flattened; antennomere IX triangular, length =  $1.2 \times$  width; antennomere XI circular, slightly elongate. Terminal maxillary palpomere triangular, slightly asymmetrical,  $2 \times$  wider than long. Terminal labial palpomere triangular, asymmetrical, width =  $2 \times$  length, width equal to terminal maxillary palpomere.

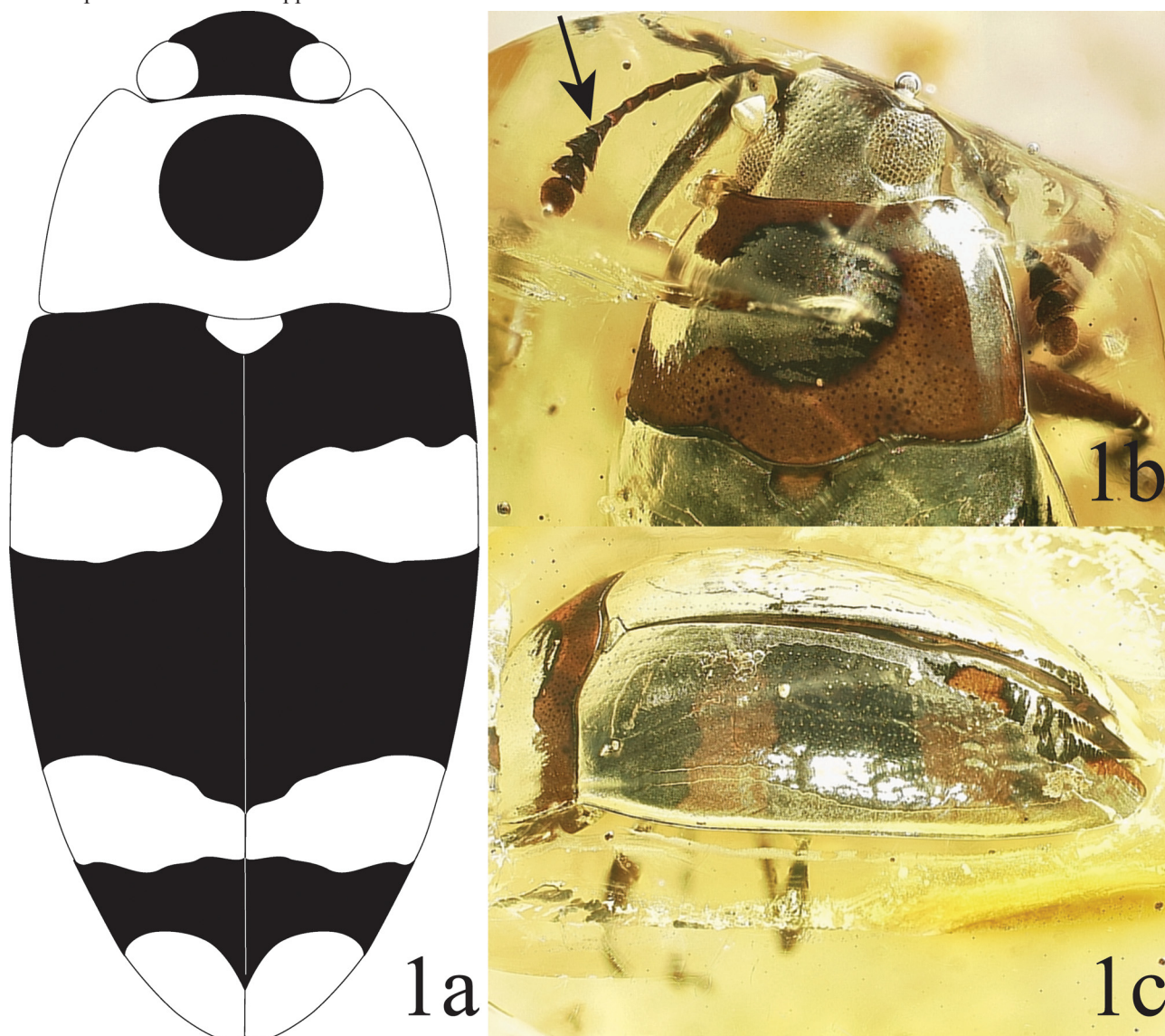
Pronotum transverse; punctures on disc equal to those on head in size and distribution; with small group of indistinct larger punctures at each side of base. Scutellar shield pentagonal, length =  $0.5 \times$  width. Elytral striae punctures weak; intervals with fine punctures.

Prosternum slightly convex, length =  $2.0 \times$  intercoxal width; sternal punctures fine; sternal lines not continuous around coxal cavity, turning medially in front; base shallowly concave. Mesoventral lines parallel, not continuous around coxal cavity. Metaventricle long, distance between meso- and metacoxae =  $1.6 \times$  intermesocoxal width; anterior lines meeting medially; not continuous around mesocoxal cavity, with short coxal line; punctures fine, obscured, widely scattered. Abdomen with coxal lines not meeting medially; line not continuous around metacoxal cavity, with short coxal line; general punctation fine medially, indistinct laterally. Sex unknown.

**Distribution.** Dominican Republic (Santiago).

**Type Material.** Holotype reported from Santiago mines of the Dominican Republic, with red label “HOLOTYPE *Notaepytus quisqueya* Keller and Skelley 2019”. Deposited in FSCA.

**Etymology.** The island of Hispaniola was called Quisqueya by the aboriginal Taíno people. We here apply Quisqueya to this species as a noun in apposition.



**FIGURE 1.** 1a) *Notaepytus quisqueya* **sp. nov.**, habitus drawing adapted from Skelley (2009). 1b) Dorsal image of head and pronotum of *Notaepytus quisqueya* showing the distinctive circular, black macula on the disc of the pronotum, and the triangular and flattened antennomere VIII (arrow). 1c) Dorso-lateral view of the left elytron of *Notaepytus quisqueya* showing the distinct elytral marks.

## Discussion

*Notaepytus quisqueya* appears to belong to a group of species near *N. fulvitaris* (Lacordaire, 1842) and will key to couplet 13 in Skelley (2009) but is readily distinguished from all species by characters discussed in the diagnosis. The specimen comes from mines in the Cordillera Septentrional near Santiago de los Caballeros and is between 20–15 million years old (Grimaldi 1995; Iturralde-Vinent & MacPhee 1996).

## Emendation of key in Skelley (2009)

- 13(8) Pronotum orange with large central black mark. . . . . *N. quisqueya*, new species  
 - Pronotum entirely black or with color pattern having central disc orange. . . . . 13a



- 13a. Pronotum entirely black (figs. 96, 128), at most with small, indistinct pale mark at anterior angle; Dominican Republic (La Altagracia) ..... *N. decoregens* Skelley  
 - Pronotum black with large distinct pale marks on anterior angles (figs. 95, 97–99); widespread Hispaniola ..... 14

## Checklist of species

*Notaepytus* Skelley, 2009

Type species: *Ischyryus flavitarsis* Lacordaire, 1842

<i>Notaepytus baorucoensis</i> Skelley, 2009.	Hispaniola
<i>Notaepytus cubanacan</i> Skelley, 2009.	Cuba
<i>Notaepytus cyanoros</i> Skelley, 2009.	Jamaica
<i>Notaepytus cyclosignatus</i> Skelley, 2009.	Hispaniola
<i>Notaepytus decoregens</i> Skelley, 2009.	Hispaniola
<i>Notaepytus elateroides</i> Skelley, 2009.	Jamaica
<i>Notaepytus elongatus</i> Skelley, 2009.	Hispaniola
<i>Notaepytus flavitarsis</i> (Lacordaire, 1842).	Bahamas, Cuba, Hispaniola
<i>Notaepytus fulvitarsis</i> (Lacordaire, 1842).	Hispaniola
<i>Notaepytus haitensis</i> (Curran, 1944).	Hispaniola
<i>Notaepytus ignotensis</i> Skelley, 2009.	Hispaniola
<i>Notaepytus inversus</i> Skelley, 2009.	Hispaniola
<i>Notaepytus lavegaensis</i> Skelley, 2009.	Hispaniola
<i>Notaepytus modestus</i> (Olivier, 1807).	Hispaniola
<i>Notaepytus neibaensis</i> Skelley, 2009.	Hispaniola
<i>Notaepytus quisqueya</i> † Keller and Skelley, 2019.	Hispaniola
<i>Notaepytus tarsalis</i> (Lacordaire, 1842).	Hispaniola
<i>Notaepytus tarsatus</i> (Lacordaire, 1842).	Cuba

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